

Paper DSC 203: PROGRAMMING WITH C & C++

Hours Per Week: 5

Credits: 5

Exam Hours: 1 ½

Marks: 50U+35P+15I

Objective: Fundamental Concepts of Programming in C and Object Oriented Programming in C++.

UNIT-I: Introduction: Computer of Languages- Flow charts-algorithms-History of C language - Basic Structure-Programming Rules -Commonly used library functions - Executing the C Program - Pre-processors in "C"- Keywords & Identifiers - Constants - **Variables:** Rules for defining variables - Scope and Life of a Variable--**Data types** - Type Conversion - Formatted Input and Output operations. **Operators:** Introduction - Arithmetic - Relational - Logical - Assignment - Conditional - Special - Bitwise -Increment / Decrement operator.

UNIT-II: Conditional statements: Introduction - If statements - If-else statements - nested if-else - break statement-continue and exit-statement - goto-statement-Switch statements. **Looping statements:** Introduction-While statements - Do-while statements - For Statements-nested loop statements.

UNIT-III: Functions: Definition and declaration of functions- Function proto type-return statement- types of functions and Built-in functions. **User-defined functions:** Introduction-Need for user defined Function and Components of functions. **Arrays:** Introduction-Defining an array-Initializing an array-One dimensional array- Multi dimensional array. **Strings:** Introduction-Declaring and initializing string- and Handling Strings -String handling functions. **Pointers:** Features of pointers- Declaration of Pointers- advantages of pointers.

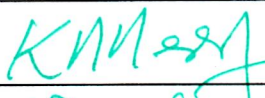
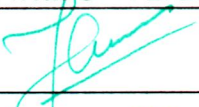




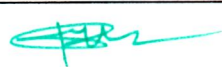


UNIT-IV: Structures: Features of Structures - Declaring and initialization of Structures - Structure within Structure-Array of Structures- Enumerated data type. **Unions** - Definition and advantages of Unions comparison between Structure & Unions.


Object Oriented Programming: Introduction to Object Oriented Programming - Structure of C++ -Simple program of C++-Differences between C & C++

UNIT-V: Classes and Objects: Data Members-Member Functions - Object Oriented- Class-Object- Encapsulation-Abstraction concepts-Polymorphism (Function overloading and Operator Overloading) Inheritance- (Inheritance Forms and Inheritance Types).

SUGGESTED READINGS:

1. Programming with C& C++ :Indrakanti Sekhar, V.V.R.Raman & V.N.Battu, Himalaya Publishers.
2. Programming in ANSI C: Balagurusamy, McGraw Hill.
3. Mastering C: K.R. Venugopal, McGraw Hill.
4. C: The Complete Reference: H.Schildt, McGraw Hill.
5. Let Us C: Y.Kanetkar, BPB.
6. Objected Oriented Programming with C++: E. Balagurusamy, McGraw Hill.


KNN 2021